

## PROJECT DESCRIPTION

## GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC CONTROL SIGNAL AND INTERSECTION LIGHTING AT THE INTERSECTION OF U.S. 40 (BALTIMORE NATIONAL PIKE) AND RIDGE ROAD/N. RIDGE ROAD IN HOWARD COUNTY, MARYLAND. U.S. 40 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

## INTERSECTION OPERATION

THE INTERSECTION OPERATION WILL REMAIN THE SAME. THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE.

## CONTROLLER REQUIREMENTS

THE EXISTING BASE MOUNTED CABINET AND CONTROLLER WILL BE USED. THE CONTROLLER EQUIPMENT WILL BE RETRO-FITTED TO OPERATE NEW VIDEO DETECTION EQUIPMENT.

## MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.04-01 (SHOULDER WORK) STANDARD NO. MD-104.04-13 (LEFT TURN BAY CLOSURE)  
STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE) STANDARD NO. MD-104.04-15 (INTERSECTION LEFT LANE, TURN BAY)  
STANDARD NO. MD-104.04-05 (RIGHT LANE CLOSURE)

## PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

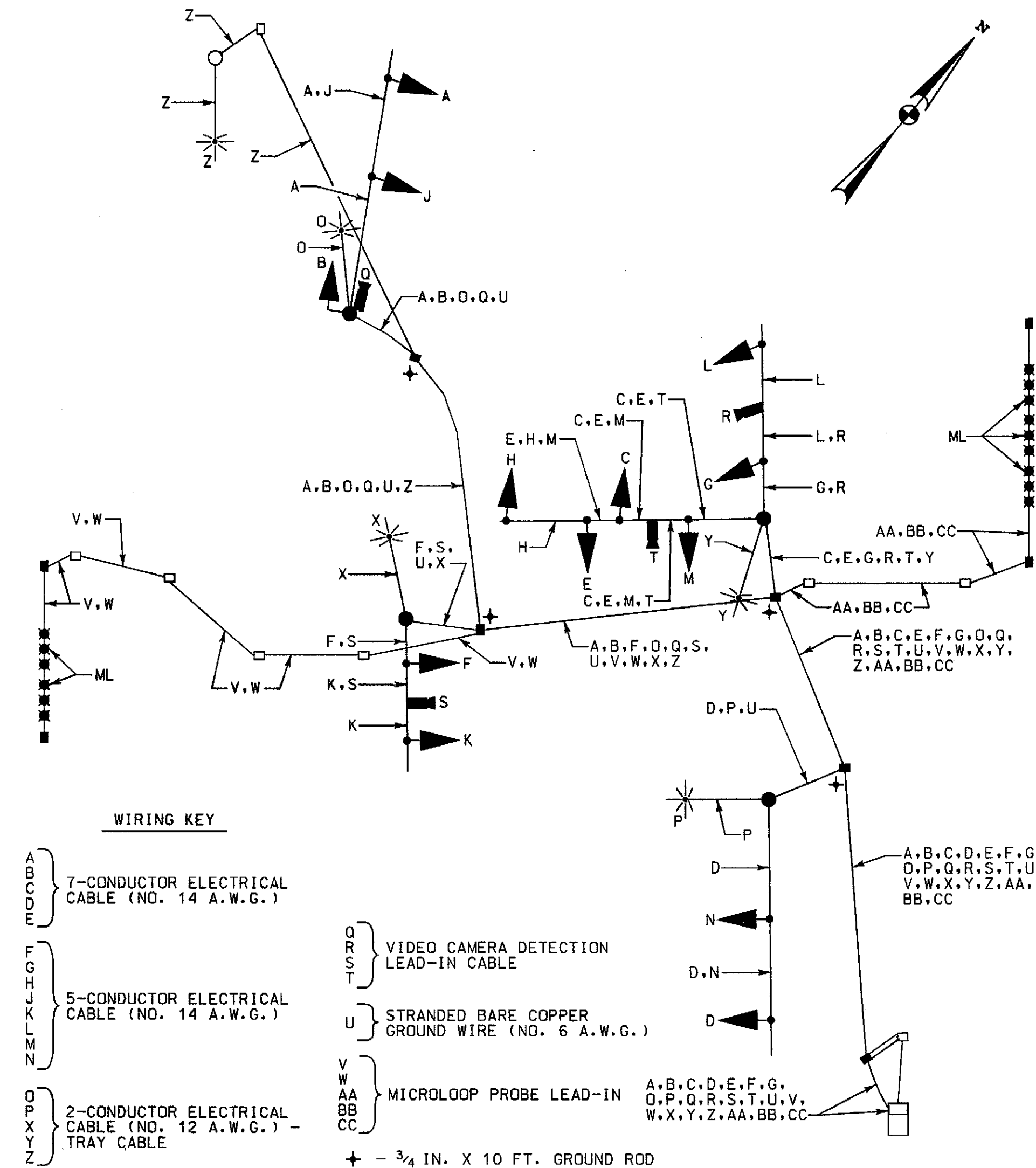
MR. JOHN CONCANNON  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
PHONE: (301) 624-8140/8141

MS. ANDREA ABEND  
DISTRICT UTILITY ENGINEER  
PHONE: (301) 624-8115/8116

MR. RAY JOHNSON  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
PHONE: (301) 624-8105

MR. RICHARD L. DAFF, SR.  
CHIEF, TRAFFIC OPERATIONS DIVISION  
PHONE: (410) 787-7630

## WIRING DIAGRAM



## EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
9086	1 EACH	VIDEO INTERFACE EQUIPMENT: 1-8 CAMERAS
9571	202 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : <ul style="list-style-type: none"><li>2 EACH D-3(1) SIGN (VARIABLE x 16 IN.) - MAST ARM MOUNT</li><li>2 EACH R3-1 SIGN (30 IN. x 30 IN.) - MAST ARM MOUNT</li><li>2 EACH R3-2 SIGN (30 IN. x 30 IN.) - MAST ARM MOUNT</li><li>4 EACH R3-5(L) SIGN (30 IN. x 36 IN.) - MAST ARM MOUNT</li><li>3 EACH R3-5(R) SIGN (30 IN. x 36 IN.) - MAST ARM MOUNT</li><li>2 EACH R3-6 SIGN (30 IN. x 36 IN.) - MAST ARM MOUNT</li><li>1 EACH R10-11b SIGN (24 IN. x 24 IN.) - MAST ARM MOUNT</li><li>1 EACH R6-1(L) SIGN (36 IN. x 12 IN.) - GROUND MOUNT</li><li>1 EACH R6-1(R) SIGN (36 IN. x 12 IN.) - GROUND MOUNT</li><li>2 EACH R10-16 SIGN (30 IN. x 36 IN.) - MAST ARM MOUNT</li><li>1 EACH ASSOCIATED SHIELD ASSEMBLY "WEST, US 40, LEFT ARROW" (36 IN. x 75 IN.) - POLE MOUNT</li><li>1 EACH ASSOCIATED SHIELD ASSEMBLY "EAST, US 40, LEFT ARROW" (36 IN. x 75 IN.) - POLE MOUNT</li><li>1 EACH ASSOCIATED SHIELD ASSEMBLY "EAST, US 40, RIGHT ARROW" (24 IN. x 48 IN.) - POLE MOUNT</li><li>1 EACH ASSOCIATED SHIELD ASSEMBLY "WEST, US 40, RIGHT ARROW" (24 IN. x 48 IN.) - POLE MOUNT</li></ul>

## EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

ALL REMOVED SIGNAL MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR

## PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 1 + 5	←G→	←G→	R	R	FLY	FLY	←G→	←G→	R	R	R	R	←G→	←G→	R	R
1 + 5 CHANGE	PHASE 1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5 OR PHASE 2 + 6															
PHASE 1 + 6	←G→	←G→	G	G	FLY	FLY	←R→	←R→	R	R	R	R	←R→	←R→	R	R
1 + 6 CHANGE	←Y→	←Y→	G	G	FLY	FLY	←R→	←R→	R	R	R	R	←R→	←R→	R	R
PHASE 2 + 5	←R→	←R→	R	R	FLY	FLY	←G→	←G→	G	G	R	R	←G→	←G→	R	R
2 + 5 CHANGE	←R→	←R→	R	R	FLY	FLY	←Y→	←Y→	G	G	R	R	←Y→	←Y→	R	R
PHASE 2 + 6	←R→	←R→	G	G	FLY	FLY	←R→	←R→	G	G	R	R	←R→	←R→	R	R
2 + 6 CHANGE	←R→	←R→	Y	Y	FLY	FLY	←R→	←R→	Y	Y	R	R	←R→	←R→	R	R
PHASE 3	←R→	←R→	R	R	FLY	FLY	←R→	←R→	R	R	←G→	←G→	G	G	R	R
3 CHANGE	←R→	←R→	R	R	FLY	FLY	←R→	←R→	R	R	Y	Y	Y	Y	R	R
PHASE 4	←R→	←R→	R	R	FLY	FLY	←R→	←R→	R	R	R	R	G	G	←G→	←G→
4 CHANGE	←R→	←R→	R	R	FLY	FLY	←R→	←R→	R	R	R	R	R	Y	Y	Y
FLASHING OPERATION	←FLR→	←FLR→	FLY	FLY	FLY	FLY	←FLR→	←FLR→	FLY	FLY	FLR	FLR	FLR	FLR	FLR	FLR

## EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
1001	2 EACH	MAINTENANCE OF TRAFFIC
2001	4 C.Y.	TEST PIT EXCAVATION
5004	45 L.F.	5 INCH HEAT APPLIED WHT OR YEL PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING
5005	110 L.F.	REMOVAL OF EXISTING PERM PAVEMENT LINE MARKINGS ANY WIDTH
5007	65 L.F.	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
8006	5 EACH	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH 250 WATT HPS LAMP & LUMINAIRE
8010	1 EACH	CONDUIT BEND IN EXISTING FOUNDATION - ANY SIZE
8015	1 EACH	MAST ARM POLE & 38 FT MAST ARM ANY 'T' DIMENSION
8016	1 EACH	MAST ARM POLE & 60 FT MAST ARM ANY 'T' DIMENSION
8018	1 EACH	MAST ARM POLE & 50 FT MAST ARM ANY 'T' DIMENSION
8020	5 EACH	NONINVASIVE DETECTOR (ANY LENGTH) LEAD IN CABLE UP TO 1000 FT
8021	1 EACH	REM & DISPOSE MAT & EQUIP PER ASSIGN
8023	1 EACH	TWIN MAST ARM POLE & 50 FT/50 FT MAST ARMS ANY 'T' DIMENSION
8025	4 EACH	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
8032	465 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - BORED
8034	190 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8035	51 L.F.	WOOD SIGN SUPPORTS UP TO 4 X 6
8036	202 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8038	370 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8045	9 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8050	49 EACH	12 INCH LED SIGNAL HEAD SECTION
8052	2 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8056	640 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8057	1550 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8058	1530 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TC

**SHA**

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION

US 40 (Baltimore National Pike) at Ridge Road/N. Ridge Road  
Ellicott City, Maryland

## GENERAL INFORMATION SHEET

SCALE NONE ADVERTISED DATE 2032010 CONTRACT NO. XX4245185

DESIGNED BY S. Bloss COUNTY Howard  
DRAWN BY S. Bloss LOGMILE 130041018.58  
CHECKED BY N. Leary TMS NO. K091  
F.A.P. NO. TOD NO.

TS NO. 951 M DRAWING TSP-3 OF 3 SHEET NO. 3 OF 3

**WR&A**

WHITMAN, REQUARDT  
& ASSOCIATES, LLP  
801 South Caroline Street, Baltimore, Maryland 21231

PLOTTED: 02-04-2010  
FILE: r:\31869-040\cad\p5g-N003\_K091.dgn